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Date October 17, 2003

To Examiner Thu Khanh T. Nguyen, Group Art Unit 1722

Of U.S. Patent and Trademark Office

Fax 703-872-9673

From John J. Dresch

Subject Interview Agenda for U.S. Application No. 09/732,788

Our Ref Q62242 U.S. Application No. 09/732,788

Pages 9  
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**DRAFT - FOR INTERVIEW PURPOSES ONLY - DRAFT**

**This Interview Agenda is being submitted in accordance with 37 C.F.R. § 1.133(b)  
for Interview purposes only.**

**Interview agenda (for U.S. Application No. 09/732,788): Date: October 20, 2003**

**Date / time / location.**

Monday, October 20, 2003 @ 2 PM, Crystal Plaza III (Reception 8<sup>th</sup> Floor)

**Participants:**

Applicants' representative:

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**Discussion:**

- 1) Discuss proposed claim amendments: Cancel claims 1, 2, and 4.
- 2) Discuss and explain the features of the present invention as recited in claims 3 and 5.
- 3) Discuss the features of cited references as compared to the features of claims 3 and 5.

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**APPENDIX**

**LISTING OF CLAIMS:**

Claims 1 and 2 (canceled).

3. (previously presented): An apparatus for waterproofing a terminal connecting portion of a sheathed wire, in which a terminal fitting and a bared conductor of the sheathed wire are connected with each other, by molding with resin, the apparatus comprising:

an upper mold having an inner space provided with a dome-shaped ceiling face, which defines an upper part of a molding cavity in which the terminal connecting portion of the sheathed wire is accommodated and molten resin is injected therein; and

a lower mold having an inner space which defines a lower part of the molding cavity,

wherein a curvature of the dome-shaped ceiling face is made coincident with a curvature of an upper face of the terminal fitting so that a thickness of the molten resin between the ceiling face and the upper face of the terminal fitting is substantially identical.

4. (canceled).

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5. (previously presented): The apparatus as set forth in claim 3, wherein the dome-shaped ceiling face comprises at least two radii of curvature in an identical cross-sectional plane, in accordance with a shape of an outer face of the terminal fitting.

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**REMARKS**

To summarize claims 1-5 have been examined.

In the present Office Action, the Examiner maintains and makes final the rejections of claims 1-5 of the present Office Action. In particular, the Examiner rejects claims 1-3 under 35 U.S.C. § 102(b) as being anticipated by either Richardson (U.S. Patent No. 4,204,896), Birchler et al. (U.S. Patent No. 4,043,027), or Saito (U.S. Patent No. 5,620,711). Additionally, the Examiner rejects claims 1-5 under 35 U.S.C. § 102(b) as being anticipated by Davis et al. (*Applied Plastic Product Design*, Prentice-Hall 1946, page 74).

Applicant proposes canceling rejected claims 1, 2, and 4 without prejudice or disclaimer. Therefore, Applicant's remarks are directed to pending claims 3 and 5 only.

**I. Illustrative, non-limiting embodiment of the Invention**

The present invention relates to an apparatus for waterproofing a terminal connecting portion of a sheathed wire, in which a terminal fitting and a bared conductor of the sheathed wire are connected with each other, by molding with resin. The apparatus comprises an upper mold having an inner space provided with a dome-shaped ceiling face, which defines an upper part of a molding cavity in which the terminal connecting portion of the sheathed wire is accommodated and molten resin is injected therein. The apparatus further comprises a lower mold having an inner space which defines a lower part of the molding cavity. A curvature of the dome-shaped ceiling face is made coincident with a curvature of an upper face of the terminal fitting so that a

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thickness of the molten resin between the ceiling face and the upper face of the terminal fitting is substantially identical. See, for example, Figure 3.

## **II. Richardson**

The Examiner maintains the rejection of claim 3 under 35 U.S.C. § 102(b) as being anticipated by Richardson.

The grounds of rejection state that the recitation “the dome-shaped ceiling face of the upper mold has a curvature that is coincident with a curvature of an outer face of the terminal fitting” is interpreted that the dome-shaped face of the upper mold has a curvature corresponding to a curvature of an outer face of the produce (i.e. terminal fitting) being formed inside the mold cavity (see Office Action, Response to arguments, page 4, last paragraph). However, for at least the following reasons, Applicant respectfully disagrees.

First, Applicant notes that the outer face of the terminal fitting is not the same as the outer face of the resin formed in the mold. Additionally, Applicant respectfully submits that the grounds of rejection do not identify the disclosure in Richardson, nor is Applicant aware of such a disclosure either explicitly or implicitly, in Richardson, that corresponds to the features of claim 3. Instead, Richardson appears to disclose merely that the mold cavity may contain joints such as “straight-through” cable joint, as shown in Figures 1-6, or a “star-joint”, as shown in Figures 7-9 (see column 2, lines 10-17; column 4, lines 10-14). Thus, the upper mold of Richardson does not necessarily have a curvature that is coincident with a curvature of an outer

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face of the terminal fitting, as claimed. In fact, Richardson does not mention the shape of the terminal fitting, other than stating that each conductor is crimped into a ferrule, typically using a hexagonal crimping tool (see column 3, lines 16-24). For at least these reasons, Applicant respectfully submits that Richardson does not anticipate claim 3.

**III. Birchler**

The Examiner maintains the rejection of claim 3 under 35 U.S.C. § 102(b) as being anticipated by Birchler. In the Response to Arguments, the Examiner considers the curved faces of Birchler, as shown in Figure 5, to be curved vertical faces. As such, the grounds of rejection states that Birchler discloses all of the limitations of claim 3. However, with respect to claim 3, Applicant respectfully submits that the grounds of rejection do not establish, or mention, the manner in which Birchler discloses that the ceiling face of the upper mold has a curvature that is coincident with a curvature of an outer face of the terminal fitting, as recited in claim 3. Instead, the Examiner only refers to the surface of the resin (i.e., the product 110) formed by the mold (see Office Action page 2, numbered paragraph 4). Therefore, Applicant respectfully submits that claim 3 is not anticipated by Birchler.

**IV. Saito**

The Examiner maintains the rejection of claim 3 under 35 U.S.C. § 102(b) as being anticipated by Saito. The grounds of rejection state that Saito discloses that the ceiling face of the upper mold has a curvature selected so as to be coincident with the curvature with an outer

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face of the terminal fitting, as allegedly shown by reference numeral 39 and described at column 4, lines 4-10. For at least the following reasons, Applicant respectfully disagrees with the Examiner's position.

Saito merely states that packing material 23 is supplied through the injecting port 13 and is spread between the wires over the tapered surface 15, and reaches the space 37. Additionally, Saito states that "a drum-like portion 39 is formed at the central portion of the wire bundle". See column 4, lines 4-10. However, the packing material 23 is comparable (at best) to the resin used in the mold, not the terminal fitting. Therefore, Saito does not disclose that the ceiling face of the upper mold has a curvature that is coincident with the curvature of an outer face of the terminal fitting as recited in claim 3. Instead, the packing material 23 merely fills the mold. Therefore, Applicant respectfully submits that claim 3 is not anticipated by Saito.

**V. Davis**

The Examiner maintains the rejection of claims 3 and 5 under 35 U.S.C. § 102(b) as being anticipated by Davis. The grounds of rejection state that Davis discloses a "dome-shaped face corresponding with the forming product" (see Office Action, page 3, numbered paragraph 6; emphasis added). That is, the Examiner seems to take the position that the dome-shaped face corresponds to some product encapsulated within the molded plastic material. However, Applicant respectfully disagrees with this position because Davis clearly does not disclose, or mention, any product disposed within the plastic material in the mold. That is, Davis clearly

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does not disclose that the upper mold has a curvature that is coincident with the curvature of an outer face of the terminal fitting, as recited in claim 3, since Davis does not mention a terminal fitting or any other product to be formed within the plastic material, which is injected into the mold. Thus, Davis does not disclose or suggest all of the recitations of claims 3 and 5.

Accordingly, Applicant respectfully requests that the Examiner withdraw the rejection of claims 3 and 5 based on Davis.